

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

- 1                   1.       (Original)     A method of manufacturing an encapsulated calorimetric  
2 flow meter comprising the following steps:  
3                   providing an integrated circuit assembly incorporating a fluid flow channel, at  
4 least two temperature sensing elements operative to measure the temperature in different regions  
5 of the channel and a heating element located in between the temperature sensing elements to heat  
6 a region of the channel;  
7                   applying a quantity of gel to the integrated circuit such as to cover at least each  
8 end of the channel, thereby forming a gel-covered assembly;  
9                   inserting the gel-covered assembly into a cavity of a moulding tool ensuring that  
10 at least a portion of the gel is in contact with a surface of the cavity;  
11                   introducing a plastic mould compound into the cavity so as to encapsulate the gel-  
12 covered assembly except for the portion in contact with the cavity surface; and  
13                   removing the assembly from the cavity, whereby there is an opening defined in  
14 the plastic mould encapsulating the gel-covered assembly at each end of the channel thus  
15 allowing fluid to flow through the channel.
- 1                   2.       (Original)     A method as claimed in claim 1 wherein the channel is  
2 filled with gel before the integrated circuit is encapsulated.
- 1                   3.       (Currently Amended) A method as claimed in ~~any preceding~~ claim 1  
2 wherein the integrated circuit is mounted on a lead frame.
- 1                   4.       (Original)     A method as claimed in claim 2 wherein the lead frame has  
2 holes which coincide with the end of the channel when the integrated circuit is mounted on the  
3 lead frame and the gel is applied so as to cover the holes in the lead frame.

1                   5.       (Original)     A method as claimed in claim 4 wherein there are slots  
2 provided in the lead frame alongside that portion of the lead frame forming a wall of the  
3 passageway.

1                   6.       (Original)     A method as claimed in claim 5 wherein the slots do not  
2 extend past the holes in the lead frame at either end of the passageway.

1                   7.       (Currently Amended) A method as claimed in ~~any preceding~~ claim 1  
2 wherein the channel is formed by etching.

1                   8.       (Currently Amended) A method as claimed in ~~any preceding~~ claim 1  
2 wherein the channel is provided upon a reverse face of the integrated circuit and the temperature  
3 sensing elements and heat sensing element are provided upon a front face.

1                   9.       (Currently Amended) A method as claimed in ~~any preceding~~ claim 1  
2 wherein the integrated circuit is a CMOS integrated circuit.

1                   10.     (Currently Amended) A method as claimed in ~~any preceding~~ claim 1  
2 wherein means are provided to allow direct or wireless communication between the integrated  
3 circuit and external circuitry.

1                   11.     (Currently Amended) A method as claimed in ~~any preceding~~ claim 1  
2 wherein the integrated circuit additionally incorporates processing means to calculate a mass  
3 flow from the temperature difference detected by the temperature sensing elements.

12.     (Currently Amended) A method as claimed in ~~any preceding~~ claim 1  
wherein additional circuit elements are incorporated into the integrated circuit, said additional  
circuit elements including one or more elements selected from: means operative to interface  
between the heating and sensing means and external electronic control means; means operative  
to receive and store calibration data for the temperature sensing means; means operative to  
convert analogue signals to digital signals; include means operative to carry out calculations on

the digital signals to facilitate improved or additional performance or to improve accuracy or to compensate the measurements for external or internal change; and means provided at the fluid inlet and the fluid outlet such that the errors due to the inlet and outlet temperatures not being equal can be corrected by calculation.